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(2) Date of repair

(3) Initials of the Referencer

MADRAS RECORD OFFICE

Government of Madras

Public works DEPARTMENT

G.O. No. 1826		Press
B.P. No. 296-297		Mis.
Dated 16 7		1843.

Not to be folded or roughly handled

1.R.6

No. 298.

Special Assistant Engineer's Office
Madura 13th June 1873

From,

Lieutenant M. Greer R.E.
Assistant Engineer
On special duty
Madura.

To,

Lieutenant Colonel R. A. Roberts R.E.
District Engineer
Madura.

Sir,

With reference to your Endorsement No. 5585 of the 27th March 1873 on G.O. No. 799 of the 13th March 1873, I have the honor to forward herewith a Revised Estimate for the Ghaut including those of the Bridges below 30 feet span for which the Inspecting Engineer has supplied plans as well as those for the Bungalows proposed to be built for the Officer attached to the Goodaloor Ghaut and Perryaur works. As I prefer

Enclosures 15.

1 Goodaloor Ghaut Detailed Estimate.
1 – Abstract Estimate Do. " Rupees – 50,000.
1 – Specification — Do. —
1 – Comparative Statement Do. "
1 – Estimate for Bridge 70' span – Rs – 3270.
1 – Do. — Do. – 25" Do. – Rs – 1030
1 – Do. — Do. – 15 – Do. – Rs – 700
1 Specification – Do. – Do. —
2 – Plans. — Do. – Do. —
1 – Abstract Estimate for Constructing Road from foot of Ghaut to Goodaloor. — Rs 15,450.
~~1 – Specification – Do. – Do. —~~
1 – Estimate for Constructing Travellers' Bungalow – Rs. 3,460
1 – Specification – Do. – Do. —
1. – Plan — Do. – Do. —

15

Lieutenant

Lieutenant Colonel Farewell's 70 feet truss to that proposed by Captain Pennycuick. I have also estimated for it; Plans for this shewing the abutments and wing walls are not yet complete, they will be forwarded in a couple of days. —

2. In forwarding these Estimates, I take the opportunity of making the following remarks on Lieutenant Colonel Farewell's report. —

3. According to para 9, the slopes as suggested have been omitted in the new Estimate, with the exception of the portions from the last zigzag to the foot of the Ghaut which was completed (with the exception of metalling) when Colonel Farewell inspected the work. —

4. According to paras 10 and 11 the inside drain has been omitted in the Estimate and the Surface of the Road will be barrel shaped

shaped as suggested.

5. As regards para 15, I dont quite understand whether the "Smaller Tunnels" refer to the 3rd Class Culverts in the Original Estimate or to the small road Tunnels. I would feel obliged by this information being supplied as soon as possible. The amount allowed for these Culverts by Captain Pennycuick is much too low for constructing them in Chunam. As I think myself they ought to be constructed in chunam, I have increased the rate in the new Estimate; the prices of the 1st & 2nd Class Culverts has also been increased in the new Estimate. —

6. With regard to paras 16, 17, 18 and 19 new Estimates &ca have been made out for the Bridges according to Standard plans supplied by Colonel Farewell. The mistake about the 50' Bridge is explained by Captain Pennycuick having designed the Bridges at **Madras** on his way to the Camp

of

of Exercises and having no Copy of the Ghaut Estimate, he did not know for Certain how many bridges there were of each class. It was originally intended to put a 50' bridge over the 2nd Crossing of the Muriaparyam but it was afterwards decided to blast out a channel in the rock of the river and to only put a 25' bridge, Rs 350 extra being the Cost for the blasting of the Channel the Cost of this Bridge was increased to Rupees 1000.

7. A Road Dam has been substituted for a 25' Bridge over the nullah mentioned in para 20.

8. An Estimate for Bangalow Cook house and Bath Room, are submitted but as I do not intend to have a Camp at the top of the Ghaut this year having Completed the 1st Mile from the head. I think this service ought to be postponed for the present as the houses will be of no

use

use to me or my subordinates. Constructing a Kraal round the Bungalow will save us nothing as fires will have to be kept up in the two Cooly Camps; surrounding these Camps with Kraals would be out of the question owing to the Cost; eventually when the Bungalow is built, I would suggest that trenches 6'x4' be dug instead of having the timber Kraals. —

9. Since making out the original Estimate the Forest Department authorities state that they intend charging us Seignorage for the future on all the firewood used by the Coolies, also for the wood used in the Bridges, Mammoties, building huts &c. &c. the Seignorage demanded for the wood of the Bridges has increased the rate for teak about half a rupee per Cubic foot this, of course, makes a Considerable difference in the Estimate - The Seignorage

for

for the firewood will amount to Rs 1,200 per season, this item is included in the Contingencies. —

10. In Conclusion, I have the honor to request that I may be informed on the date that this Revised Estimate is sanctioned by Government whether I can proceed with the bridges &c. without waiting for the printed G.O. as it will be as much as I can possibly do to get the Ghaut finished this year. Captain Pennycuick's designs with remarks about them by Captain Coningham are herewith returned.

I have the honor to be &c.

(Signed) M Greer Lieut. R.E.
Assistant Engineer
On Special duty

(True Copy)

Ricd. Roberts Lieut. Col. R.E.
District Engineer Madura

7

4

Enclosure No 1 in a letter from the District Engineer Madura dated 16th June 1873.

No 1029.

To The Secrety to Govt
D. P. W.
Madras.

A

Copy of Lieutenant Greer's Letter No 298 dated 13th June 1873 on the Subject of Goodaloor Ghaut Works. —

Rd 16 July/73 B 4.
296.
P. W. 3604/73.

81

No 1029. District Engineer's Office
Madura 16th June 1873.

From,

Lieutenant Colonel R. A. Robertson
District Engineer
Madura

To,

Enclosures. 17 with:-

Colonel G. W. Walker RE
Secretary to Government D.P.W.
Madras

Sir,

In compliance with the instructions contained in G.O. 13th March 1873, No 799, I have the honor to submit herewith the revised estimates for the works connected with the construction of the Goodaloor Ghaut and the road below to Goodaloor.

2. As directed in your Memo No 21 dated 11th December, I forwarded on the 14th idem to Lieutenant Colonel Farewell the Plans and Estimates prepared by Captain Pennycuick RE, and received in this Office but a few days previously, for the bridges and other Masonry works on the road and Ghaut

A Copy of Lieutt McGreer's letter No 298 dated 13th June 1873

B. Revised Abstract Estimate of Rs 50,000 from foot of Goodaloor Ghaut to Travancore frontier.

C. Do detailed Estimate of Do

D. Do Specification of Do

E Comparative State-ment of Do

F. Plan of Timber plat-form bridge of 15 feet span (sent separately)

G. Do Do Do of 25 feet Do (Do)

H. Do Do Do of 70 feet Do (Do)

I. Estimate for a bridge of 15 feet span Rs 700 (Plan F)

J. Estimate for a Bridge of 25 feet span Rs 1000 (Plan G)

K Estimate for a Bridge of 70 feet span Rs 3270 (Plan H)

(over)

Ghaut between Goodaloor and the Travancore frontier. And I forwarded at the same time the estimate of Rupees 15,000, also prepared by Captain Pennycuick R.E. for the roads from the foot of the Ghaut to Goodaloor. The Ghaut Estimate of Rupees 48,000 was forwarded, as you will recollect, direct by you to Lieutenant Colonel Farewell. —

3. These Estimates and Plans have not been returned to me, but Lieut. Colonel Farewell in his letter No. 115/3 dated 23rd and received 30th Ultimo, notifies the dispatch to me per Banghy of the 3 Plans, Copies of which are now submitted.

4th It will be seen from the enclosed letter from Lieut. Greer R.E. dated 13th instant No. 298, that in the preparation of the Estimates now submitted every attention has been paid to the instructions

of

L. Specification of Do.
M Abstract Estimate of Ro 15450 for Constructing Roads from foot of the Ghaut to Goodaloor
N. Specification of Do.
O. Estimate for Travellers' Bungalow Rupees 3460.
P Specification Do.
Q. Plan of Do. (Sent Separately)

2

11

of Government contained in the G.O. above quoted, and the information afforded in that letter leaves but little for me to add here.

5 As regards the Ghaut Estimate which, as now revised, amounts to Rs 50,000, the enclosed Comparative Statement shows a saving of Rupees 3630 by the omission, as directed, of the slopes and inside drain, but the Cost of the bridges on the designs forwarded by the Inspecting Engineer have increased the Estimate, and a further increase is due to an increase of rate for Masonry work, as it has been found by actual experiment that the rates allowed in the original Estimate for this description of work are not adequate for the purpose.- The estimate is also considerably increased, as Lieutenant Dreer R.E. points out, by the seignorages now charged by the Forest Department

6.

6. As regards the enclosed Estimate "C" for the Road from the foot of Ghaut to Coodaloor, the Estimate is increased by Rupees 450, thus raising its total to Rupees 15,450. A Comparative Statement will follow in due Course, but as the Estimate has not been returned to me, and there is no Copy of it in this Office, I am unable to submit the Statement at the present moment.

7. The Enclosed Estimate for the Bungalow amounts, as it will be seen to Rs 3,460. The Grand total of the Ghaut works thus Comprises the following items: viz.

a. — Ghaut — Rs — 50,000.
b. — Road below Ghaut. Rs — 15,450
c. — Bungalow. — Rs — 3,460.

Grand Total. Rupees 68,910.

or Rs 8,910 in excess of the Sanctioned allotment.

8. As regards the Bungalow

I quite concur with Lieutenant Greer in considering that its construction may well be deferred for the present. In any case, I think the expensive Kraal can be dispensed with. 300 Running feet of Kraal as proposed will confine the bungalow buildings to a very small enclosure, and shut out all ventilation; and unfortunately the great cost of constructing a Kraal is prohibitive of its sufficient extension. As cuttings at the head of the Ghaut stand well with vertical sides, trenches 6'×4' as proposed by Lieutenant Greer R.E., will be effectual, and they can be made at a trifling cost to any extent required. By the exclusion of the Bungalow from the Estimate, the total amount of the Ghaut & Road Estimate is reduced to Rs 65,450, leaving only a Balance of Rupees 5,450 to be eventually sanctioned. ——

9. With regard to the provision for the services of a medical Subordinate, as directed in Para. 4 of the G.O., I may mention that the Local Fund Board Dindigul Circle have sanctioned the Establishment of a Dispensary at Ootama:pollium, which is only 10 miles from Goodaloor. Under these circumstances Lieutenant Greer concurs with me in considering that the services of a special Medical Subordinate for the Ghaut, are scarcely required. —

10. As regards the bridges it will be seen that the designs forwarded by Lieutenant Colonel Farewell have been followed. The truss of 40 feet has been adopted, as on the whole it appears preferable to Captain Pennycuick's designs, for the locality in question. I consider however that

4

that a Conspicuous defect in these bridges is the absence of a fender Course and of road joists. The road planks are placed diagonally, immediately over the bridge ties. The leverage on these planks - 2'.6" between bearings - will be Considerable, And I would Certainly recommend longitudinal joists to support transverse planks; as from experience I am Satisfied that with this system, the planks are less liable to disturbance. I think it also only due to myself to state that I cannot approve of the long overhanging cantilevers introduced, devoid of Counterprises, in the design for bridges of 25 feet span.

11 With regard to para 5 of Lieutenant Prior's letter, I shall feel obliged by your furnishing me with instructions as to whether, as I imagine, it is only the road

road-tunnels which are to be built without mortar. —

12. In Conclusion I have the honor to state that both Lieutenant Greer and myself have done our best to make up for the delay which has occurred in the furnishing of the bridge-designs, that we were directed to follow; the working season is just Commencing and I shall feel particularly obliged therefore by receiving authority at as early a date as possible to Commence the Construction of these bridges. —

I have the honor to be
Sir,
Your Most Obedient Servant.

Ricd. J. Roberts Lieut. Col. A.
District Engineer Madura

5

17

P. W. 1873 Depart.
Prog. of Govt. July No. 1029.[14]
From No. 3604.
The District Engineer
Madura.

To The Secrety. to Govt.
D. P. W.
Madras.

Dated 16th June 1873.
Despd. 19th Do. Do.
Received 23 Do. Do.

Encls: 17.
No. 1826 - 16th July/73
Submits Revised
Estimate &c. for the
works connected with
the Construction of the
Goodaloor Ghaut and
the road below to
Goodaloor
Rs. × 10[illegible]

No. 296
[illegible] 23rd June/73

Civil Works

P. W. D. 19

No. 1826

Proceedings of the Madras Government,

Under date the 187 .

From the D.C. Engr., Madura (A.E. No. 1029 d/ 16 June/73)

Read the following :—

The estimate for the new Goodaloor Ghaut may stand at the sum of Rs. 48,000 first named; as the Forest Department can only be permitted to claim seignorage on timber of value, taken from the jungles for bona fide work. Such

a

a claim as that for firewood necessary for Cooking the Coolies food, temporarily hutting them, and keeping off wild Elephants, has never before been made or allowed - And the use of Chunam may be dispensed with in the construction of all the Drains and Tunnels except in the Piers of the 1st Class Drains - The estimate for the Road from

11

from Goodaloor to the Ghant is sanctioned at Rs 15,450 - That of the Bungalow at Rs 2,550, deep trenches being substituted for wooden palings, and a partition added to divide the space into two rooms of equal size - It should be built at once in order that it may have the benefit of Lieutt Greer's super-vision - Total of

Sanction

sanctions, Rs 66,000; of which Rs 19,898 were spent in 1872/73, Rs 40,000 are allotted for this year and the rest may be had on application.

The Inspecting Engineer will be instructed to modify his plan of the superstructure of the Bridges of 25 feet span, with reference to the District Engineer's objection to the

Cantilevers in which
the Chief Engineer con-
-curs - the objections to
the mode of laying
down the planking
are understood not
to have been found
valid in the actual
experience of many
timber bridges simi-
-larly covered -

G.W.W.

40/6

To 4 J. Engr for Ports & Commns with all
Original Enclosures.

[illegible]

6 Dt. Engr Madera
11 Civil Dept
Controller
Acct General -

New Gordon
Ghat

h: 296.97.
[illegible]

1-2-08 ✓

No. 3604

Govt. of {1873} Madras.

PUBLIC WORKS.

To the Inspecting Engr for Ports & Communications

Dated

Recd.

Encl. 1

G. O. 16th July 1873, No. 1826.

Nos. 296 & 297

New Goodalore Ghaut.

Passing orders on letter from the D. Engr., Madura, submitting revised Estimate &c, for the works connected with the construction of the Goodalore Ghaut & the road thence to Goodalore.

C.F. 73. DEPARTMEN[T]

Paper taken out of the Records from the charge of the Referencer.

Press / Miscellaneous / Routine No. 2, dated 3 - 1 - 19

Date taken out	For what purpose			Initials of clerk taking the paper or of attendar.	Date returned.	Initials of attendor.
	Department.	C. No.	Year.			
18-7-30	MCO	5540	30	[illegible]	24/10/30	[illegible]

Date taken out	For what purpose.			Initials of clerk taking the paper or of attender.	Date returned.	Initials of attender.
	Department.	C. No.	Year.			

P.W.D. I துறை

குறிப்பிட்டவர் பொறுப்பிலிருக்கும் பதிவுக் கட்டிலின்றும் எடுக்கப்பட்ட தாள்.

அச்சு
பல்வகை
வாலாயம்
} எண் 589 I

தேதி 3/8/1898

எடுத்த தேதி. (1)	எதன் பொருட்டு துறை. (2)	நடப்பு எண். (3)	ஆண்டு. (4)	தாள் எடுக்கும் எழுத்தர் அல்லது சிற்றெழுத்தர் சுருக்கொப்பம். (5)	திருப்பிக் கொடுத்த தேதி. (6)	சிற்றெழுத்தரின் சுருக்கொப்பம். (7)
			RH	20/12/13 [illegible]/182		
			[illegible]	24/2 2015 [illegible]		
1/7/16		13192/24	56/[illegible]			
29/7/16		Ren	56/[illegible]			